Before the

Federal Communications Commission

Washington, D.C. 20554

In the Matter of	)	
	)	
Universal Service Contribution Methodology	)	WC Docket No. 06-122
	)	
A National Broadband Plan For Our Future	)	GN Docket No. 09-51

Comments of AARP

August 6, 2012

David Certner
Legislative Counsel and
Legislative Policy Director
Government Affairs
AARP
601 E Street, NW
Washington , DC 20049

Table of Contents

Introduction

AARP is pleased to provide the Commission with these reply comments that address issues raised by various parties in opening comments.[1] The importance of the issues raised in the FNPRM[2] is evident from the substantial response—more than 80 sets of comments were filed, totaling over sixteen-hundred combined pages. These reply comments will address the major issues raised in the comments that responded to the FNPRM—the expansion of the contribution base to include enterprise services, text messaging, one-way VoIP, and broadband Internet access; whether and/or how bundled service revenues should be treated; whether assessment should be based on revenues, or whether a numbers-based, connections-based, or some hybrid system of assessment should be developed; how jurisdictional matters should be addressed; and whether or how universal service charge recovery should appear on customer bills. This reply will also address other issues that were raised in the opening comments, but this reply does not pretend to address each and every issue raised in the opening comments. To the extent that these comments do not address specific issues raised by a party, this should not be taken as a concession of the issue by AARP.

AARP's review of the opening comments has not revealed any information that leads AARP to change the recommendations made in opening comments. Rather, AARP finds support for the positions advanced by AARP. As will be discussed below in detail, there is broad support for expansion of the contribution base to include enterprise services, text messaging, one-way VoIP, and broadband Internet access services. AARP believes that the Commission

[1] As was the case with AARPs' opening comments, these reply comments were prepared with the assistance of Trevor R. Roycroft, Ph.D., a consultant to AARP.
[2] In the Matter of Universal Service Contribution Methodology; A National Broadband Plan for Our Future. WC Docket No. 06-122, GN Docket No. 09-51. Further Notice of Proposed Rulemaking. April 30, 2012. (Hereinafter, FNPRM).

must expand the contribution base as it transitions to the explicit support of broadband services, otherwise the universal service program will continue with its current inequities, and may become unsustainable.

As the balance of this reply will explain, when reforming the Universal Service Fund the following actions should be taken:

- The Commission should expand the contribution base to include enterprise, text messaging, one-way VoIP, and broadband Internet access services.
- The Commission should apply a revenue-based approach to assessment.
- The Commission should develop safe harbors for intrastate and bundled-service assessment purposes based on traffic studies conducted by, or in compliance with best practices developed by, the Commission. States must have the ability to assess broadband revenues for state universal service programs.
- The Commission should require service providers to identify the assessable portion of a customer's bill, and clearly state the assessment factor and assessment amount on the customer's bill.

By taking these steps, the Commission will have the ability to reform the Universal Service Fund in a manner that is consistent with the Commission's stated objectives of efficiency, fairness, and sustainability.

The Record Supports the Assessment of Broadband Services

AARP points to the imperative of assessing broadband services, especially in light of the Commission's decision to explicitly support broadband.[3] Many other parties, with a variety of different interests also argue for the assessment of broadband.[4] Those parties that oppose the

[3] AARP Comments, ¶¶42-49.
[4] See, for example, Alexicon Telecommunications Consulting Comments, p. 3; AT&T Comments, p. 13; CenturyLink Comments, p. 4; COMPTEL Comments, p. 14; Critical Messaging Association Comments, p. 5; Earthlink, Integra, and TW Telecom Comments, p. 2; GVNW Consulting, p. 3; Information Technology Industry Council, p. 3; MetroPCS Comments, p. 4; NASUCA Comments, p. 2; National Telecommunications Cooperative Association, The Organization for the Promotion And Advancement Of Small Telecommunications Companies, and

assessment of broadband services do not provide reasonable support for their position. For example, RCA, National Cable and Telecommunications Association (NCTA), and Time Warner Cable argue that assessing broadband would negatively impact broadband subscription.[5] However, RCA, NCTA, and Time Warner provide no analysis to support their assertion. Other parties, such as ADTRAN, indicate that suppression of demand would arise because the current contribution factor is so high.[6] This claim overlooks the fact that an expanded contribution base will result in a decreased contribution factor.[7]

RCA also points to the uncertainty surrounding the outstanding appeals of the *Connect America Fund Order* as another reason to delay a decision regarding assessment. While AARP agrees with RCA that there is uncertainty surrounding the ultimate scope of the Commission's ability to explicitly support broadband,[8] AARP believes that it is within the Commission's authority to assess broadband services.[9] Even if the ultimate outcome of the appeals process is to overturn the explicit support of broadband, there is no question that broadband is today being implicitly supported,[10] and thus continuation of the status quo also requires contribution from broadband services.

Verizon indicates that further study on the matter of broadband assessment is required, pointing to the potential for conflict with the Commission's "goals of achieving increased

The Western Telecommunications Alliance Comments, p. ii; Public Service Commission of the District of Columbia Comments, p. 2; Rural Telecommunications Group, Inc., Comments, p. 2; Sprint Nextel Comments, p. 3; Ad Hoc Telecommunications Users, p. 31; United States Cellular Corporation, p. 21; XO Comments, p. 28.

[5] RCA Comments, p. 8; National Cable and Telecommunications Association Comments, pp. 4-5; Time Warner Comments, p. 10.

[6] ADTRAN Comments, p. 6.

[7] ADTRAN does concede that if the contribution base is expanded, resulting in a lower contribution factor, as forecasted by State Members, that there would be much less distortion arising from an assessment on broadband. ADTRAN Comments, p. 7.

[8] AARP Comments, ¶¶3-5.

[9] AARP Comments, ¶¶24-28.

[10] AARP Comments, ¶8.

broadband adoption and promoting broadband deployment."[11] Verizon also claims that assessing broadband would be complex due to the "many different broadband platforms," pointing to DSL, cable modem, 4G wireless, and satellite.[12] AARP believes that the situation with respect to the assessment of broadband is not as complex as Verizon claims. There certainly are different technologies associated with the delivery of broadband, however, alternative technology platforms are also associated with the delivery of services that are assessed today—circuit-switch voice provided by an ILEC, wireless calling provided on a 3G or 4G network, cable voice, interconnected VoIP, and satellite telephone services are all provided on different platforms, and are assessed.[13] Thus, Verizon's claim does not withstand scrutiny.

No Party Has Provided Evidence that Assessing Broadband Would Adversely Affect Broadband Subscription—the Goolsbee Study is Not a Credible Basis for Evaluating Broadband Elasticity

Three parties, Comcast, Fiber-to-the-Home Council, and Level 3 utilize a 2006 study by Austan Goolsbee (Goolsbee study) to support their claims that broadband should not be assessed.[14] Comcast argues that assessing residential broadband would generate problems that would be "particularly acute for residential consumers, whose demand for broadband services is likely quite elastic."[15] In support of its claim that demand for broadband is elastic, Comcast points to the Goolsbee study.[16] Comcast's use of the conclusions of the Goolsbee study is highly questionable as the time period studied and data sources utilized by Goolsbee are not reasonable. The Goolsbee study, while published in 2006, relies on 1998 data, and specifically focuses on a

[11] Verizon Comments, p. 41.
[12] Verizon Comments, p. 42.
[13] http://www.usac.org/cont/about/who-must-contribute/default.aspx
[14] Comcast Comments, pp. 16-17; Fiber to the Home Counsel Comments, p. 5; Level 3 Comments, p. 4, referring to Austan Goolsbee, The Value of Broadband and the Deadweight Loss of Taxing New Technology, 5 B.E. J. ECON. ANALYSIS & POLICY 1505 (2006). (Goolsbee study.) Available at: http://faculty.chicagobooth.edu/austan.goolsbee/research/broadb.pdf .
[15] Comcast Comments, p. 16.
[16] Comcast Comments, p. 17, footnote 47.

hypothetical projection of demand in market areas where broadband service may not even be available:

> Summing these individual demand curves in each of the top 69 metro areas gives market level demand curves even for markets where there is no broadband access yet.[17]

Broadband uptake at that time was extremely limited, and primarily based on DSL technology. For example, the Goolsbee study identifies a take-rate for cable modem services (in areas where it was available) of 2.2%.[18] Thus, the sample utilized in the Goolsbee study is not representative of current market conditions—today cable modem broadband is the dominant form of mass-market broadband technology.[19] Second, the Goolsbee study relies on willingness-to-pay data from a 1999 survey conducted by Forrester research. The Forrester research poses a hypothetical question to consumers *who do not have broadband* regarding their willingness to pay for a service that is "100 times faster than on conventional modems."[20] Thus, the Forrester research is not based on actual consumer purchases, but a hypothetical question about a service which the consumer had never experienced. Assessing demand elasticity based on willingness to pay estimates for a service the consumer has never experienced will not result in a reliable estimate of the true willingness to pay for the service. This weakness flows through to the results of the Goolsbee study. The conclusions reached in the Goolsbee study, which are cited as Comcast's sole basis for its statement that broadband demand is "quite elastic," are simply no longer credible. There have been tremendous changes over the past 14 years that influence consumer

[17] Goolsbee study, p. 8.
[18] Goolsbee study, p. 9.
[19] See, for example, Tables 7, 8 and 9 in "Internet Access Services: Status as of June 30, 2011," Federal Communications Commission, Industry Analysis and Technology Division Wireline Competition Bureau, June 2012. Available at: http://transition.fcc.gov/Daily_Releases/Daily_Business/2012/db0614/DOC-314630A1.pdf
[20] Goolsbee study, p. 9.

attitudes toward the purchase of broadband. Broadband has become a necessity, [21] not the hypothetical consumer choice in the Goolsbee study.

Fiber-to-the-Home Council argues, again based on the Goolsbee study, that the imposition of an assessment on broadband access would generate negative effects for the economy.[22] Fiber-to-the-Home Counsel notes that "the [Goolsbee] analysis went on to find four markets where an access tax on broadband in 1998 would have caused producers not to enter the market, but without the tax, the producer surplus would have warranted entry (Miami, Cleveland, Tampa and Milwaukee).[23] Here again, the application of market conditions as evaluated by a single study in 1998 to the assessment of broadband services in 2012 is not reasonable. Broadband is no longer an "infant industry" that must be sheltered from bearing its fair share of assessment. Furthermore, there is little risk of broadband providers abandoning their substantial fixed investments[24] due to the assessment of broadband services. Rather, the expansion of universal service support to broadband services is likely to lead to broadband entry where none has occurred to date.

Level 3 also raises concerns regarding the impact of the assessment of broadband on broadband subscription, and points to the same Goolsbee study relied upon by Comcast.[25] Level 3 also finds support for its position in comments filed by the Mercatus Center, in a discussion of the negative impact of taxes through deadweight loss.[26] However, the Mercatus comments relied on by Level 3 utilize the same Goolsbee study discussed above,[27] thus Level 3, to make its point,

[21] *National Broadband Plan,* p. 338.
[22] Fiber-to-the-Home Counsel, p. 6.
[23] Fiber-to-the-Home Counsel, p. 5.
[24] *National Broadband Plan,* p. 36.
[25] Level 3 Comments, p. 4, footnote, 8.
[26] Level 3 Comments, pp. 4-5.
[27] Mercatus Center Comments in WC Docket 05-337, March 27, 2008, p. 14.

relies on outdated and inappropriate information. Given the availability of more recent data on broadband elasticity, as presented by AARP,[28] it is striking that Level 3, Fiber-to-the-Home Council, and Comcast have decided to present the Commission with data that is 14 years old and unrepresentative of current market conditions.

AARP certainly agrees that the Commission should carefully consider the impact of the assessment of broadband on demand; however, there is no evidence that demand will be adversely affected, especially in light of the interrelationship of demand for broadband and telecommunications services that are currently assessed. Consumers who purchase services *à la carte* should see a decrease in bills for currently-assessed services and an increase in the bill for broadband services—the combined impact on consumer broadband purchase decisions is not clear cut. Consumers who purchase currently-assessed services and broadband services in a bundle could see no net change in their monthly bill, suggesting little impact from the assessment of broadband. AARP believes that expanding the contribution base to include all services that benefit from the supported platform will result in a smaller contribution from each service—the offsetting impact of reductions in the assessment on currently-assessed services will make demand suppression from the assessment of broadband less likely.[29] The Commission must also consider the positive benefits associated with expanded broadband availability, and count these as an offset to any expected demand suppression.[30]

As the Commission now recognizes, broadband is a necessity,[31] with the result being inelastic broadband demand.[32] If the price elasticity that Comcast and Level 3 identify reflected

[28] AARP Comments, ¶45.
[29] AARP Comments, ¶47.
[30] AARP Comments, ¶48.
[31] *National Broadband Plan*, p. 338.
[32] AARP Comments, ¶45.

reality, the price increases that have been implemented by Comcast and other broadband providers would be highly unprofitable. For example, using the midpoint of the elasticity range identified by Comcast would indicate that a 5% increase in broadband prices would result in a 14.6% decrease in broadband quantity demanded.[33] As AARP has noted, broadband providers have implemented price increases of this magnitude and there is no indication that broadband subscription has dropped anywhere near 14% as a result.[34] If demand for broadband is elastic as Comcast asserts, Comcast and other broadband providers would not find a price increase strategy to be profitable.[35]

As discussed by AARP, given recent elasticity estimates for broadband services, the interrelationship between broadband and currently-assessed services, and the positive impact on subscription that expanded broadband availability will have, there is no reason to expect a significant negative impact on broadband subscription.[36] The Commission should assess broadband Internet access services.

The Record Supports the Assessment of One-Way VoIP Services

AARP recommended that one-way VoIP services be assessed to support universal service objectives.[37] AT&T notes that failure to assess one-way VoIP could result in gaming:

> Indeed, any given retail mass market VoIP customer could easily integrate, onto a single device, both “one-way outbound” and “one-way inbound” services, thereby essentially creating the basic functionality of two-way interconnected VoIP services while escaping contribution obligations under current rules.[38]

[33] Comcast indicates that the range of demand elasticities if from 2.15 to 3.68, resulting in a midpoint of 2.91. Using this value a 5% price increase would result in a decrease in quantity demanded of 14.55%.
[34] AARP Comments, ¶44.
[35] AARP Comments, ¶45.
[36] AARP Comments, ¶¶43-48.
[37] AARP Comments, ¶41.
[38] AT&T Comments, p. 15.

The California Public Utilities Commission notes that one-way VoIP should be assessed as "one-way interconnected VoIP providers compete with traditional telephone providers and two-way interconnected VoIP providers," a sentiment also expressed by Time Warner Cable and Verizon.[39] NASUCA states that one-way VoIP should be classified as telecommunications, and regardless of the classification, one-way VoIP should be assessed.[40] COMPTEL states that assessment is appropriate as "one-way VoIP providers provide interstate telecommunications and compete with traditional telephone service providers."[41] RCA encourages assessment and says "one-way VoIP services rely on the public switched telephone network just as 'interconnected' (or two-way) services do, as one-way services by definition provide connectivity to or from conventional telephone numbers."[42] Earthlink states that assessment will encourage competitive neutrality—"including one-way VoIP providers in the contribution base will level the playing field between such providers and providers of assessable telephone and interconnected VoIP services," United States Cellular makes this same point.[43] Sprint Nextel indicates that assessing one-way VoIP "should not be controversial as it would merely close an unintended loophole and a major competitive inequality in the current system."[44] National Telephone Cooperative, et al. state that "one-way VoIP unquestionably relies upon and benefits from access to the PSTN,"[45] and thus should be assessed, with Rural Telecommunications Group and XO expressing similar sentiments.[46] GVNW Consulting notes that assessment of one-way VoIP will be consistent with

[39] California Public Utilities Commission Comments, p. 6; Time Warner Cable, Inc. Comments, p. 7; Verizon Comments, p. 28.
[40] NASUCA Comments, p. 9, footnote 38.
[41] COMPTEL Comments, pp. 13-14.
[42] RCA Comments, pp. 6-7.
[43] Earthlink Comments, p. 3; United States Cellular Comments, p. 73.
[44] Sprint Nextel Comments, p. 5, footnote 8.
[45] National Telecommunications Cooperative Association, The Organization for the Promotion and Advancement of Small Telecommunications Companies, and The Western Telecommunications Alliance, p. 14. (Hereinafter "National Telephone Cooperative, et al.".)
[46] Rural Telecommunications Group, p. 5; XO Communications Services LLC Comments, p. 27.

principles of technological neutrality: “These one-way VoIP services utilize the same network as do interconnected VoIP services. We believe that this proceeding is the proper time for the Commission to ameliorate this inequitable definitional dilemma.”[47] MetroPCS, while supporting the assessment of one-way VoIP services notes that the Commission’s proposed rule requiring assessment if the one-way VoIP enables “real time two-way voice communications,” is overly narrow as the two-way limitation opens the potential for ambiguity and gaming: “The definition of telecommunications does not include such a two-way limitation and this definition should not as well. Accordingly, MetroPCS supports revising the first prong to read ‘enables real-time voice communications.’”[48] AARP agrees with MetroPCS’ assessment, and urges the Commission to make the suggested modification.

On the other hand, Microsoft, the owner of Skype, indicates that Skype’s “Call Phone and Mobiles” and “Online Number” products would be considered one-way VoIP,[49] but also argues that these and other one-way VoIP services should not be assessed. Microsoft states:

> [O]ne-way VoIP service is much different from an “interconnected VoIP service,” most notably because it is neither intended to be nor is used as a replacement for a consumer’s traditional wireline or wireless service. One-way VoIP services could not be viewed as replacements or close substitutes for telecommunications services….[50]

Microsoft’s position is directly contradicted by Skype’s marketing materials, as shown on Skype’s web site:

- What’s great about calling mobiles and landlines with Skype

  > Call colleagues and business partners wherever they are, at great flat rates, day or night.[51]

[47] GVNW Consulting Comments, p. 8.
[48] MetroPCS Comments, p. 19.
[49] Microsoft Comments, p. 8.
[50] Microsoft Comments, p. 9.
[51] http://www.skype.com/intl/en-us/features/allfeatures/call-phones-and-mobiles/

- Why you'll love an Online Number

  The number that reaches you – wherever you are

  > An Online Number (also called Skype number) is a number anyone can call you on from their mobile or landline - and you answer on Skype, no matter where you are. And with every Online Number you also get voicemail included. Then when family and friends call your Online Number and you're unavailable, they simply leave a message which you can listen to the next time you sign in to Skype."[52]

- What's great about Skype conference calls

  A smarter way to do business

  > Save time, money, and reduce travel. Get your business contacts and colleagues on one call, whether they're in their office or on their mobile.[53]

As the quotes above illustrate, Skype is marketed to compete with all other voice services, including services that are currently assessed. Thus, contrary to Microsoft's contention, the competition between Skype (and other providers of one-way VoIP services) and services that are currently assessed point to the appropriateness of assessing these services.

Verizon advocates that the Commission should exercise its permissive authority over one-way VoIP.[54] Verizon also states that voice services without end-user revenues should be required to contribute based on a proxy. While AARP agrees with Verizon that "free" voice services benefit from the same high-speed network infrastructure as traditional voice services, AARP does not believe that the Commission should directly assess these "free" over-the-top providers at this time. The service providers offering these services will be assessed if the Commission begins to assess all enterprise services that enable the delivery of over-the-top voice

[52] http://www.skype.com/intl/en-us/features/allfeatures/online-number/
[53] http://www.skype.com/intl/en-us/features/allfeatures/conference-calls/
[54] Verizon Comments, p. 28.

(as well as other services that ride on top of broadband connections).[55] Similarly, the assessment of mass-market broadband connections will result in the users of over-the-top VoIP services contributing to the fund.

In summary, for the reasons discussed in AARP's Comments, which are echoed by numerous parties, as quoted above, assessing one-way VoIP is good policy, and one-way VoIP services should be assessed.

The Record Supports the Assessment of Text Messaging Services

Because text messaging services currently benefit from the explicit support for the PSTN, and from implicit support for broadband, it is entirely reasonable to assess text messaging services.[56] Expanded support for broadband will continue to provide benefits for text messaging services.[57] Many parties agree with AARP that text messaging services should be assessed.[58] Twilio, a provider of cloud services that incorporates text messaging features, argues persuasively for the Commission to end the regulatory uncertainty surrounding the status of text messages and to classify them as telecommunications services:

> When the Commission included interconnected VoIP in USF contributions without classifying VoIP as a telecommunications or information service, it continued years of disputes and litigation between companies over the status of VoIP when it could have provided regulatory certainty. The Commission should work to avoid this same scenario for SMS and provide regulatory certainty.[59]

[55] AARP Comments, ¶¶49 & 75.
[56] AARP Comments, ¶36.
[57] AARP Comments, ¶35-39.
[58] Alexicon Comments, p. 3; California Public Utilities Commission Comments, p. 2; COMPTEL Comments, pp. 12-13; Critical Messaging Association Comments, p. 4; GVNW Consulting, p. 8; National Telephone Cooperative, et al. Comments, p. 10; Time Warner Comments, p. 2; NASUCA Comments, pp. 11-12; USA Mobility Comments, p. 4; XO Comments, p. 26.
[59] Twilio Comments, p. 7.

AARP agrees with Twilio's evaluation—the Commission can end much of the regulatory uncertainty by designating assessed services as telecommunications services.[60]

Other parties, such as AT&T, Sprint Nextel, Verizon, and CTIA, argue against the inclusion of text messaging revenues.[61] However, those that oppose the inclusion of text messaging revenues do not reasonably support their position. For example, AT&T points to the rise of over-the-top texting alternatives as undermining the Commission's ability to assess text messaging revenues.[62] While it is certain that these alternatives will impact text messaging revenues, so will carrier bundling practices.[63] This countervailing factor is clearly illustrated by AT&T, which describes the "all you can eat" bundles of voice, data, and texting that are coming to dominate wireless carrier offerings.[64] Text messaging services will continue to be relevant precisely because the marketing approaches of wireless carriers are encouraging or compelling consumers to purchase text messaging services.

CTIA, Verizon, and Sprint argue that text messaging services should not be assessed because text messaging is an information service, and contains all the technical components of information services.[65] On the other hand, T-Mobile describes text messaging as a hybrid service:

> Text messaging, which is a subset of mobile data services, shares many of the characteristics of voice telephony, electronic mail, and other messaging applications offered by a wide range of providers and is increasingly a substitute for these services.[66]

---

[60] AARP Comments, ¶¶1-5.
[61] AT&T Comments, p. 14; CTIA Comments, pp. 22-26; Sprint Comments, p. 34; Verizon Comments, p. 38.
[62] AT&T Comments, pp. 13-14.
[63] AARP Comments, ¶38.
[64] AT&T Comments, p. 1.
[65] CTIA Comments, pp. 23-24; Sprint Comments, p. 34; Verizon Comments, p. 38.
[66] T-Mobile Comments, pp. 7-8.

As suggested by T-Mobile, the more important consideration is how the service is utilized by consumers, and how it thus affects substitute services. Regardless of whether text messaging service has characteristics of information services, the Commission should exercise its permissive authority and assess text messaging. As noted by AARP in opening Comments, substitutability between voice and text services argues for the assessment of texting.[67]

CTIA, Verizon, and Sprint's argument misses the mark as the Commission has already determined that information services can be assessed. VoIP services have not been deemed telecommunications services by the Commission, but the Commission assesses these information services.[68] Sprint ignores the permissive authority issue by simply asserting, in one sentence with no other support, that there is "no basis" for assessing text messaging under the Commission's permissive authority.[69] Verizon states that "It would be contrary to the public interest and detrimental to consumers to burden texting services with even more taxes and fees."[70] Verizon overlooks the offsetting benefits of the expansion of broadband availability and the reduction of the assessment of telecommunications services, both of which are consistent with the public interest and beneficial to consumers. Verizon's claim of harm due to assessment is also contradicted by Verizon's pricing practices. As discussed by AARP in opening comments, Verizon and other carriers have implemented multiple price increases for text

[67] AARP Comments, ¶37.
[68] See, AARP Comments, ¶¶25-26; see also *In the Matter of Universal Service Contribution Methodology, Federal-State Joint Board on Universal Service, 1998 Biennial Regulatory Review – Streamlined Contributor Reporting, Requirements Associated with Administration of Telecommunications Relay Service, North American Numbering Plan, Local Number Portability, and Universal Service Support Mechanisms, Telecommunications Services for Individuals with Hearing and Speech Disabilities, and the Americans with Disabilities Act of 1990, Administration of the North American Numbering Plan and North American Numbering Plan Cost Recovery Contribution Factor and Fund Size, Number Resource Optimization, Telephone Number Portability, Truth-in-Billing and Billing Format, IP-Enabled Services.* WC Docket No. 06-122, CC Docket No. 96-45, CC Docket No. 98-171, CC Docket No. 90-571, CC Docket No. 92-237, NSD File No. L-00-72, CC Docket No. 99-200, CC Docket No. 95-116, CC Docket No. 98-170, WC Docket No. 04-36, Report and Order and Notice of Proposed Rulemaking, June 27, 2006.
[69] Sprint Comments, p. 34.
[70] Verizon Comments, p. 38.

messaging, which is contrary to the public interest and detrimental to consumers as it offers no offsetting benefits.[71] The Commission should not be persuaded by Verizon's arguments, and text messaging should be assessed.

RCA and AT&T argue that assessing text messaging service would be distortionary, because there are other text-messaging-like services that would remain unassessed.[72] These commenters offer no support for their claims. While the development of text messaging alternatives is likely to grow, there is no reason to exclude text messaging services that are offered by wireless carriers. As discussed by AARP[73] (and AT&T[74]), wireless carrier practices of bundling are automatically generating revenues from text messaging services. Whether text messaging services are sold on an *à la carte* basis, or to the extent that text messaging services are contained in bundles, those text messaging services (as well as other services in the bundle) should be assessed.[75]

Rural Telecommunications Group (RTG) recommends that if text messaging is assessed, that all over-the-top text messaging services should also be assessed.[76] To support its position, RTG points to an over-the-top text messaging service called Kik Messenger.[77] AARP disagrees with RTG's position.[78] Assessing text messaging services that are provided on an over-the-top basis would be administratively complex and is not necessary. AARP recommends the assessment of all services that enable the consumption and delivery of over-the-top services (i.e., the enterprise services that enable the delivery of content and services, and mass-market

[71] AARP Comments, ¶38.
[72] RCA Comments, p. 7; AT&T Comments, p. 14.
[73] AARP Comments, ¶38; AT&T Comments, p. 1.
[74] AT&T Comments, p. 1.
[75] AARP Comments, ¶60.
[76] Rural Telecommunications Group, p. 7.
[77] *Id.*
[78] AARP Comments, ¶15.

broadband connections). With this approach the users and providers of over-the-top services contribute to the fund, without each specific over-the-top service being assessed.

The Record Supports the Assessment of Enterprise Services

As discussed in AARP's opening Comments, assessment of enterprise services is reasonable policy. Enterprise service customers will gain benefits from the expanded availability of broadband services that will result from the application of universal service funds to broadband deployment.[79] Many other commenters also favor the assessment of enterprise services.[80]

MetroPCS correctly frames the issue of enterprise service assessment in terms of network effects (the approach advocated by AARP), and also raises the issue of competitive neutrality:

> [E]ach of these enterprise services – whether provided via IP-based infrastructure or traditional switched circuits – benefits from the ubiquity of the national communications network. And, importantly, each of these services contains a telecommunications component. In order to equitably broaden the USF contribution base, the Commission should determine that enterprise services such as Dedicated IP, Virtual Private Networks ("VPN"), Wide Area Networks ("WAN"), among other traditional enterprise services, each include a telecommunications component and, therefore, are required to contribute to the USF. This will level the playing field between competing enterprise service providers, and between enterprise service providers and other providers of traditional telecommunications services that compete in this space.[81]

As also noted by National Cable and Telecommunications Association (NCTA), exempting MPLS-based enterprise services creates a distortion, "Exempting those services from

[79] AARP Comments, ¶31.
[80] Alexicon Telecommunications Consulting, p. 3; AT&T Comments, pp. 15-16; CenturyLink Comments, p. 6; COMPTEL Comments, pp. 8-9; GVNW Consulting, p. 9; MetroPCS Comments, p. 20; NASUCA Comments, p. 12; National Telephone Cooperative Association, et al., p. 25; RCA Comments, p. 6; Ad Hoc Telecommunications Users, p. 31; Time Warner Cable, Inc., p. 5; United States Cellular Corporation, pp. 29-30; USA Mobility Inc., p. 4; XO Comments, p. 8 (endorsing the assessment of enterprise services based on the MPLS Industry Group proposal); Verizon Comments (also endorsing the assessment of enterprise services based on the MPLS Industry Group proposal).
[81] MetroPCS Comments, p. 20.

contribution merely because they use MPLS technology would provide those companies with an artificial competitive advantage that is unwarranted."[82]

International Carrier Coalition (ICC) offers an alternative perspective on the assessment of enterprise services, one that AARP does not believe is reasonable. ICC states that if the Commission assesses enterprise-related broadband connections, there is no further need to assess any other enterprise services:

> [T]he Commission can and should address problems with the growing contribution factor by expanding the contribution base to include broadband Internet access services. Such an expansion would eliminate any need to separately create specialized rules to reclassify enterprise services such as MPLS and VPN, which are typically tied to a broadband-enabled transmission service, since revenue from their underlying connections would already be subject to contribution.[83]

The Commission should not adopt ICC's proposal. ICC's position ignores the stand-alone nature of services such as VPNs, dedicated IP, managed hosting, and CDNs, which may be added to an enterprise customer's portfolio of services as separate services when the enterprise customer already has established a broadband Internet access arrangement. Managed hosting and data center services, as well as content delivery network services, represent distinct services that an enterprise customer may add to its overall service portfolio. Assessment of broadband Internet access alone does not result in a reasonable contribution from the additional enterprise services that benefit from the expanded network effects that the Commission's shift in policy will enable.[84] If the Commission had applied the "logic" of ICC's proposal to legacy services, it would not have assessed voice long distance revenues as the "underlying connection" (i.e., basic voice service) was "already subject to contribution." Clearly, that would have been inequitable and distortionary, as is ICC's proposal for enterprise services.

[82] National Cable and Telecommunications Association Comments, p. 11.
[83] International Carrier Coalition, p. 3.
[84] AARP Comments, ¶¶11-13.

Level 3 states that assessing enterprise services will be difficult because when providers respond to an RFP, they "bid on the entire solution, including both telecommunications and non-telecommunications components.[85] T-Mobile also raises this issue, but indicates that it can be addressed by the application of a bright-line rule: "Once the universe of assessable services is determined, a bright-line rule for apportioning revenues from bundled offerings that include products and services that are not assessable might be worth consideration."[86]

Level 3 also raises the issue of the assessment of self-provided services.[87] The assessment of self-provided services utilized by enterprise customers will require some additional work on the Commission's part, but does not provide an insurmountable obstacle. AT&T, when discussing its perspective on connections-based assessment, points to the importance of assessing self-provided connections:

> [S]ome large online service providers have made significant investments in fiber and server infrastructure. To a great extent, these entities "self-provide" the equivalent of the connections that their smaller competitors purchase. To maintain competitive neutrality, it is critical that any connections-based contribution mechanism include, in one way or another, these self-provided connections.
>
> …such providers could be required to estimate, using a standardized methodology, the number and capacity of connections that they would have to purchase to maintain their current level of activity if they were unable to self-provide their connectivity….[88]

While AARP does not believe that assessing connections is the most desirable policy, AT&T's point is well taken with regard to self-provided telecommunications. In the case of revenue-based assessment, the Commission could utilize data on self-provided telecommunications and establish benchmark revenue amounts to generate the level of equivalent revenues that should be assessed.

[85] Level 3 Comments, p. 16.
[86] T-Mobile Comments, p. 7.
[87] Level 3 Comments, p. 15.
[88] AT&T Comments, p. 23.

Level 3, also when advocating for a connections-based approach, proposes to exempt connections provided by CDN services, as Level 3 claims that these services are "wholesale inputs to any assessable broadband Internet access connections."[89] Level 3 is incorrect. CDNs enhance the delivery of content *to a point near the last-mile broadband facility*.[90] The technological capabilities of a last-mile broadband facility are unchanged as a result of the presence of a CDN, i.e., the last-mile broadband facility will still only transmit data based on the technical specifications of the last-mile broadband connection. To the extent that CDNs improve the customer experience, it is not because of any improvement in the last-mile facilities; rather CDNs enable traffic to bypass multiple hops on the general Internet.

Level 3 poses a series of hypotheticals in a discussion of the Commission's proposed definition's use of the term "provides transmission." It is useful to consider Level 3's hypotheticals in light of the assessment of specific enterprise services. Level 3 states:

- To use an old example, Lexis/Nexis and Westlaw once operated with dial-up access, in which the end user called a local number that connected to a local point of presence, from which traffic was backhauled to a centralized server over private line services purchased by Lexis/Nexis or Westlaw, and then the information returned to the point of presence. The same was true of many other electronic databases. Under the new proposed rule, would the purchase of private line services connecting Lexis/Nexis or Westlaw servers with its local points-of-presence have constituted the provision of "transmission" that then made Lexis/Nexis and Westlaw subject to USF contribution obligations?

AARP finds Level 3's hypothetical to be inconsistent with the architecture of the provision of database services such as Lexis/Nexis. Rather than purchasing private lines to connect its servers to local points-of-presence, as it would in the dial-up world, a database provider will either utilize an enterprise-grade broadband facility to connect its servers to its ISP, or it will utilize data center services such as managed hosting, or it will utilize a CDN to distribute its

[89] Level 3 Comments, p. 22.
[90] AARP Comments, ¶¶69-76. See also, Figure 1 and associated discussion in the "Additional Jurisdictional Issues" section of this reply.

content (or some combination of the above). The subscriber to Lexis/Nexis must bring their own broadband services, thus, Lexis/Nexis rides over-the-top in the last-mile network. Assessment of the enterprise-grade services utilized by Lexis/Nexis is appropriate, and would thus require that the enterprise services utilized by Lexis/Nexis contribute to the fund. Likewise, consumers of Lexis/Nexis services will have their broadband connections assessed. Assessment of the Lexis/Nexis retail services is not necessary given these contributions.

Level 3 continues:

- As a more current example, suppose an online music or video distributor (e.g. iTunes, Spotify, Netflix or Hulu) is distributing music or videos using a connection between the Internet and its servers to do so. Under the proposed rule, will the purchase and integration of that transmission between the Internet and the music/video distributor's server mean that the music/video distributor becomes subject to direct USF contribution, potentially on the entire revenue stream from its service?[91]

Firms such as Netflix and Hulu identified by Level 3 certainly benefit from the expansion of broadband that the universal service fund will support. Here again, these service providers also require their customers to bring their own broadband. AARP believes that if the broadband facilities that are utilized by end-users to access this type of content, as well as the enterprise services that are utilized to deliver this content (e.g., data center services, enterprise grade broadband access, and CDNs) are assessed, that there is no need to assess the specific services at this time.

Level 3 goes on to state:

- Suppose a provider operates a CDN, in which Internet content is pushed out to distributed servers where it is hosted closer to the end user. Is this providing "transmission" under

[91] Level 3 Comments, pp. 9-10.

the proposed rule because the original content is pushed out to be stored and replicated at distant servers?[92]

Level 3 here points to a self-provided CDN. Clearly with regard to CDN services, a service provider such as Akamai replicates content using its facilities, and provides transmission to its customers. A self-provided CDN, such as that being built by Netflix,[93] provides a similar service. The question then becomes whether to assess the self-provided CDN service or the services themselves. AARP would recommend that rather than assessing the retail service, that the value of the self-provided CDN be assessed.

Finally, Level 3 asks:

- Or, suppose a provider operates a cloud based data storage service. Is the connection from some point on the Internet (e.g., an interconnection point between two backbones) to the data storage servers providing "transmission" as part of the cloud-based service?[94]

AARP believes that the Commission should focus on assessment of the "ends" of the Internet. Level 3 here poses a question about IP transit-like services, which AARP does not believe should be assessed. The cloud service provider in this example would be assessed on its enterprise-grade connections.

In conclusion, the firms that provide and/or sell content or services over the supported broadband access facilities will gain benefits from expanded broadband availability, and the enterprise services that enable these firms to provide or sell content or services should be assessed.

[92] Level 3 Comments, pp. 9-10.
[93] See, AARP Comments, ¶72.
[94] Level 3 Comments, p. 10.

Case-by-Case or the More General "Provider Provides Transmission Rule"?

In Section IV of the NPRM, the Commission asked whether it should proceed through clarifications around individual services or should determine contribution obligations through a broader definitional change. In comments, AARP found that the Commission's broader "provider provides transmission rule" required some modification to be workable.[95] AARP also noted that even with the appropriately modified rule, the Commission would have to make case-by-case determinations as to whether a service was assessable.[96] Cincinnati Bell proposes a hybrid of the case-by-case approach, which would be guided by the general rule, but require that the Commission issue an annual list of assessable services.[97] COMPTEL provides a similar assessment that indicates the desirability of a list of assessable services.[98] AARP believes that should it pursue the "provider provides transmission rule" that listing assessable services will be important.

Comcast views both the case-by-case approach and definitional approaches with an unfavorable eye:

> [L]ike the case-by-case approach, a broad definitional approach is not likely to assist providers in predicting whether new services would be subject to contribution assessments. In addition, the use of this approach may increase the risk that different contribution obligations will be assessed on services that compete with one another and, thus, be inconsistent with the Commission's goals of ensuring competitive neutrality and minimizing arbitrage opportunities.[99]

Comcast believes that a connections-based approach is superior, however, Comcast ignores the fact that even with a connections-based approach, assessable connections must be defined,

[95] AARP Comments, ¶¶50-54.
[96] AARP Comments, ¶56.
[97] Cincinnati Bell Comments, p. 6.
[98] COMPTEL Comments, p. 18.
[99] Comcast Comments, p. 8.

requiring either a definitional or case-by-case approach. As a result, Comcast's criticism of these approaches in the context of a revenue-based system applies equally to a connections-based system. As will be discussed below in more detail, a revenue-based approach is superior to a connections-based approach.

Level 3 opposes the broader definitional change and instead favors a case-by-case approach.[100] However, Level 3 notes that "The main problem with the case-by-case method has been an absence of speed in any determinations."[101] Level 3 also proposes that the Commission expedite the process of determining whether or not a service is assessable by implementing a private ruling system:

> What the Commission should do to facilitate the case-by-case determinations and guidance that will inevitably need to be made is to develop a system of private rulings. A party that submits a private ruling request would present a question and proposed resolution with a rationale. The Commission would delegate authority to the Wireline Competition Bureau to issue such rulings, even when they presented new or novel issues. If the Bureau (or Commission) does not act on a request in 90 days (which would allow for third parties to review and comment), it would be deemed granted.[102]

While AARP is certainly in favor of the timely resolution of issues associated with whether or not a service is assessable, AARP is not convinced that a system of private rulings would be in the public interest. Level 3 leaves many details associated with the private ruling proposal unstated. For example, would the scope of applicability of a private ruling extend beyond the party requesting the private ruling? If it did not, then assessable services would remain unassessed for all parties other than the party that requested the private ruling. That outcome would not be reasonable. AARP recommends that the Commission take Level 3's call for expedited determinations of whether services are assessable seriously, and develop a rapid-

[100] Level 3 Comments, p. 10.
[101] Level 3 Comments, p. 11.
[102] Level 3 Comments, pp. 11-12.

response approach that will serve the public interest, whether it continues on a case-by-case basis, or adopts a more general rule.

Assessing Bundled Service Offerings

In its opening comments AARP noted that failure to assess the entire revenues associated with a bundle that contained any assessable service would encourage gaming.[103] Sprint-Nextel also points to the appropriateness of assessing the entire amount of bundled service revenues:

> If a revenue-based approach is adopted, Sprint recommends the entire bundle be subject to a USF contribution. Any separation of services will be difficult and subject to manipulation. Assessing the entire bundle will eliminate any decision on how to split the bundle or any verification of a proposed bundle split.[104]

AARP continues to believe that the process of assessment begin with the entire bundle. As will be discussed further below, application of appropriate safe harbor factors to the entire amount of a bundle is a reasonable approach to address jurisdictional issues or the inclusion of services that the Commission believes are unassessable.

AT&T advocates for the alternative approach of apportioning the stand-alone prices of the services contained in the bundle.[105] AT&T argues that if the Commission were to assess the entire revenues associated with bundled service offerings that "it should expect many contributors to buck the bundling trend by breaking apart their bundles in order to minimize the amount of their contribution assessments."[106] Comcast also argues that assessing the all bundled revenues would deter providers from offering bundles that include a mixture of assessable and

[103] AARP Comments, ¶60.
[104] Sprint Nextel Comments, p. 17.
[105] AT&T Comments, p. 25.
[106] AT&T Comments, p. 26.

non-assessable services.[107] The Commission should not lend much weight to AT&T and Comcast's conjectures. As AT&T notes elsewhere in it comments:

> [C]onsumers and enterprise customers prefer the convenience of bundled offerings, not to mention the discounts that come with most bundles. The industry or, at least, certain segments of the industry may soon reach the point where it makes no sense to offer certain services or products on a stand-alone basis because few, if any, customers desire them.[108]

While AARP takes issue with AT&T's position that stand-alone offerings are not desired by consumers (in competitive markets, market forces lead to the side-by-side offerings of bundles and *à la carte* options),[109] it seems highly unlikely that the assessment of bundled service revenues would lead to the abandonment of bundled offerings. As AARP noted in its comments, bundling is a profit improving strategy, and carriers are unlikely to abandon it because of the assessment of bundle revenues for USF purposes.[110]

AT&T also states that its operating affiliates have developed systems that assign bundled service revenues to various underlying components, and that it would have to undo these systems to comply with an assessment on bundles, which it asserts would be costly and would result in the costs of the proposal to assess all bundled service revenues to "outweigh the benefits."[111] AARP finds it hard to believe that AT&T does not know the level of revenues associated with its bundled service customers. AT&T's web site clearly shows prices for a variety of bundled service offerings,[112] and why AT&T's billing systems would not be charging those prices is less than clear—do AT&T customer bills not identify the service bundle and bundle price that the

[107] Comcast Comments, p. 10.
[108] AT&T Comments, p. 26.
[109] A recent study of mass-market telecommunications purchases by Google shows that among factors influencing consumer's decisions to purchase, the ability to bundle is rated dead last. See, "Role of the Online in the Wireline Research Process," Google/Compete, U.S., October 2011. http://www.thinkwithgoogle.com/insights/uploads/131352.pdf .
[110] AARP Comments, ¶63.
[111] AT&T Comments, p. 27.
[112] See, for example: http://www.att.com/shop/bundles.html#fbid=P3SlRErJ9xv

customer has agreed to purchase? Furthermore, even if there is some sort of disaggregation of revenues associated with AT&T bundles, it strains credulity that AT&T would not be able to extract the bundled service revenue for a customer from its systems, and it also strains credulity that the cost of writing the code necessary to identify bundled service revenues (should such an exercise be needed at all) would be prohibitive.

Verizon also is opposed to the assessment of bundled service revenues, and points to GAAP guidance on how to allocate bundled offerings for revenue recognition purposes.[113] Verizon indicates that under GAAP guidance discounts are allocated among the service in the bundle based on the vendor-specific standalone selling prices, or market selling price.[114] AARP does not believe that the approach advocated by Verizon is sufficient. As is illustrated by Verizon's recent move to an "all-you-can eat" bundle of wireless services,[115] whether standalone selling prices will be available in the future is less than clear. Establishing a market selling prices is also problematic as there may not be sufficient competition for some assessed services to generate a representative "market" price.[116]

Comcast argues that assessing bundled service revenues could run afoul of the law as multichannel video services cannot be assessed under the Commission's statutory authority.[117] Other parties raise the issue of the TOPUC ruling regarding the Commission's ability to assess bundled service revenues that include an intrastate component.[118] These claims overlook the

---

[113] Verizon Comments, p. 23. Harris Caprock also points to the sufficiency of GAAP rules. Harris Caprock Comments, p. 10.
[114] Verizon Comments, p. 23.
[115] AARP Comments, ¶38.
[116] AARP Comments, ¶43.
[117] Comcast Comments, p. 10.
[118] Cincinnati Bell Comments, p. 11; iBasis Comments, pp. 2-3; NASUCA Comments, p. 14.

Commission's ability to establish safe harbors for the assessment of bundled service revenues.[119] Through this approach, which is recommended by AARP,[120] service providers that bundle services that the Commission believes are unassessable, or which contain intrastate components, can apply safe harbor percentages to the total bundled service revenue to determine the appropriate basis for assessment. Applying safe harbor percentages would provide competitive neutrality as the Commission can apply uniform safe harbor rules. Applying safe harbor assessment also addresses Comcast's concerns regarding the alternative approach of developing assessment of bundled services by deconstructing bundles to their stand-alone components.[121] The safe harbor approach for bundles advocated by AARP would avoid entirely the need to establish pseudo prices for stand-alone components of bundles that may or may not actually exist. Cincinnati Bell also supports such an approach:

> CBI supports the adoption of bright line rules for allocation of bundled revenues. The Commission still may not assess intrastate revenues, but could develop proxy interstate percentages to be used with mixed services. One proxy could be set for most voice services, while different proxies might be needed for various categories of data services. For enterprise private line services, the current 10% rule should be abandoned and the jurisdiction determined by the originating and terminating points of the circuit.[122]

T-Mobile and United States Cellular also supports the implementation of bright-line rules to address bundle issues.[123]

Sprint Nextel indicates that the Commission could establish just two fixed allocators to address the assessment of bundled service revenues:

> A fixed allocator should be established for use with standalone voice services. A second fixed allocator would be established for broadband Internet access services and other

[119] American Cable Association, p. 8.
[120] AARP Comments, ¶65.
[121] Comcast Comments, pp. 12-13.
[122] Cincinnati Bell Comments, p. iii.
[123] T-Mobile Comments, p. 7; United States Cellular Comments, p. 38.

> bundled offerings. The Commission has already ruled that Internet access services are jurisdictionally interstate "because end users access websites across state lines." While voice services can be provided over broadband connection, the amount of capacity used by voice service is tiny—only 1.71 percent of the capacity of IP networks globally according to a usage study Cisco conducted in 2010. This would suggest that a fixed 99% interstate/ 1% intrastate allocator would be reasonable for all traffic carried over broadband connections.[124]

While AARP generally agrees that there is no need to establish a large number of fixed allocators, AARP disagrees with Sprint Nextel's proposed approach for identification of the allocator for the intrastate portion of broadband connections. The "logic" applied by Sprint Nextel—utilizing the proportion of voice traffic carried on IP networks—completely ignores the transformation of the broadband Internet that has resulted in content being pushed closer to end users, through the advent of content delivery networks and other caching strategies.[125] This transformation points to the need for empirical analysis so that the allocator established by the Commission is based on representative traffic volumes delivered over end-user broadband networks. The safe harbor allocator should be based on the amount of traffic that is delivered on an intrastate basis, and should account for the impact of locally sourced content.

Additional Jurisdictional Issues

Parties point to the importance of jurisdictional issues, and the need for the Commission to exercise care so as to not undermine state universal service objectives. The Kansas Corporation Commission notes the importance of the continued ability of the states to assess intrastate services, and the need for the Commission to clarify that states may continue to pursue their own USF goals as the federal system is reformed:

> The continued vitality of State USFs is too important to achieving the joint federal and state goal of supporting universal service to be left "twisting in the wind" for years after the FCC releases its rulemaking order….With this new round of reforms, the FCC should

[124] Sprint Nextel Comments, p. 19.
[125] AARP Comments, ¶¶69-76.

> pro-actively recognize the need to protect State USFs' contribution bases and actually do so in its rulemaking order, rather than leave the issue again to a patchwork of follow-up litigations in federal court and FCC declaratory ruling proceedings.[126]

The Nebraska Rural Independent Companies also point to the importance of the state/federal partnership.[127]

AT&T, while agreeing that broadband services should be assessed under any revenue or connections-based regime,[128] also argues that broadband services must be treated as "inseverably interstate" service.[129] Verizon makes a similar claim.[130] To support this position, both AT&T and Verizon point to the Commission's 1998 *GTE DSL Tariff Order*.[131] As noted by AARP, the nature of the Internet has changed significantly in recent years, with content delivery networks focused on bringing rich content close to end users.[132] AT&T specifically illustrates these changes in a diagram contained in AT&T's opening comments:[133]

[126] Kansas Corporation Commission Comments, pp. 6-7.
[127] Nebraska Rural Independent Companies, p. 4.
[128] AT&T Comments, p. 13.
[129] AT&T Comments, p. 13, footnote 19.
[130] Verizon Comments, p. 43.
[131] AT&T Comments, p. 13, footnote 19. Verizon Comments, p. 43, footnote 54.
[132] AARP Comments, ¶¶69-76.
[133] AT&T Comments, p. 9.

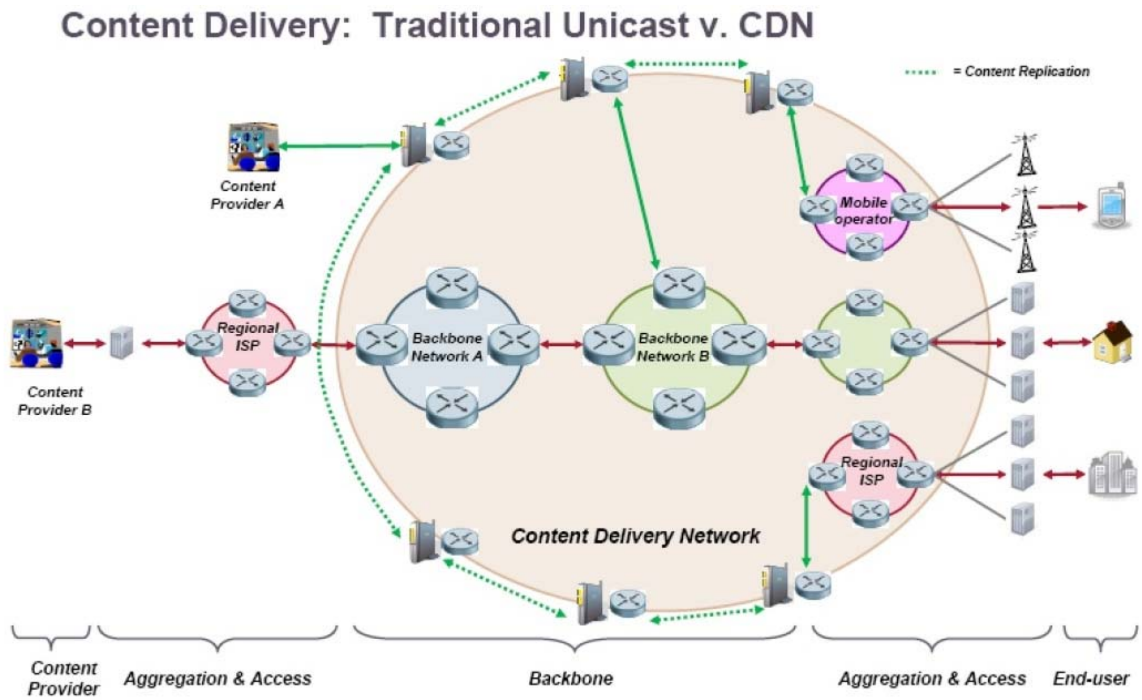

Figure 1: AT&T Illustration of "Pushing Content Closer"

AT&T's diagram shows content delivery networks placing their content closer to end users—frequently accessed content, especially large files such as video, is moved close to end-users, thus delivering large quantities of data from locations that are close to users. As a result, the previous "inseverably interstate" nature of Internet traffic is no longer the case. As noted by AARP, "It is appropriate for the Commission to establish an empirical basis for the jurisdictional division of traffic by using traffic studies, and to establish safe harbor provisions based on the evidence."[134] In a similar vein NASUCA states:

> The establishment of safe harbors distinguishing between interstate and intrastate traffic is clearly within the FCC's jurisdiction, especially given the evident ability of carriers to perform traffic studies to distinguish between jurisdictions. The establishment of safe harbors for most services — while allowing providers that disagree with the safe harbors to present tracked data or traffic studies — should simplify the revenues-based mechanism.[135]

[134] AARP Comment, p. vi.
[135] NASUCA Comments, p. 15.

While AARP agrees with the general spirit of NASUCA's recommendation, the ability of "providers to disagree" and to submit their own traffic study may encourage gaming. AT&T makes a recommendation that the Commission should adopt a "best practices traffic study" to address the jurisdictional nature of traffic.[136] AARP believes that a "best practices" approach has merit in general, as it reduces the potential for gaming. The Commission should seek data from the industry and conduct its own analysis to determine safe harbors.

Scope of Assessment and the State Members' Proposal

AARP noted in opening comments that the State Members' proposal provided a general framework for determining which entities should be assessed. AARP agrees with much of the State Members' proposal, as it reflects an approach consistent with the assessment of all entities that benefit from the expanded broadband access network, i.e., the State Members' proposal will enable the assessment of entities that benefit from the expanded network effects associated with supported broadband networks.[137] Other parties also support the State Members' proposal.[138] Verizon however, indicates that the State Members' proposal is unworkable, specifically taking issue with the State Members' proposal to assess all revenues on line 418 of Form 499:

> The revenues reported by contributors on line 418 include revenues from equipment sales and from a wide array of services that directly compete with services provided by entities that do not file a Form 499. For example, line 418 revenues might include revenues from video services, web hosting, cloud services, and IT solutions – all of which compete with services provided by entities that do not file a Form 499.[139]

It is notable that Verizon proposes to exclude revenues from enterprise services such as Web hosting, cloud services, and other IT solutions, which may certainly benefit from expanded broadband services. As AARP discussed in opening comments, these enterprise services should

[136] AT&T Comments, p. 29.
[137] AARP Comments, ¶14.
[138] CPUC Comments, p. 4; International Carrier Coalition Comments, p. 8; Sprint-Nextel Comments, pp. 14-15; United States Cellular Comments, p. 22.
[139] Verizon Comments, pp. 43-44.

be assessed.[140] However, to the extent that there are service revenues contained in line 418 of Form 499 that the Commission believes it should not assess, the solution is not, as suggested by Verizon, to not assess any of these revenues. Rather, the Commission should address exempted services by establishing a safe harbor percentage of line 418 revenues.

Revenue-Based Assessment Should Be Continued

AARP believes that a revenue-based assessment continues to be the best approach,[141] and AARP suggests improvements to the current approach.[142] Many other parties also support the continuation of a revenue-based method.[143] Alaska Communications Systems states "provider revenue associated with assessable services represents an approximation of the relative value that the market places on such services and, in turn, the capacity of such services to bear contribution obligations."[144] California Public Utilities Commission points to equity advantages associated with a revenue-based system:

> A revenues-based system is still preferable at this time to other proposed systems because it is more equitable than a numbers-based, a connection-based, or a hybrid-based system. Under a revenue-based system the burden is relative to the volume of the service consumed. Those consumers who use the most services have the greatest burden.[145]

Clearwire notes the advantages of a revenue-based approach versus other alternatives:

> A revenues-based system is relatively straightforward, simple to implement, and easy to administer. In contrast, it appears that a connections-based methodology would be more complex and expensive to administer than the current revenues-based contribution

[140] AARP Comments, ¶¶30-34.
[141] AARP Comments, ¶58.
[142] AARP Comments, ¶¶66-76.
[143] Alexicon Telecommunications Consulting, p. 4; Alliance of Automobile Manufacturers, p. 1; COMPTEL Comments, p. 21; International Carrier Association Comments, p. 6; International Carrier Coalition Comments, p. 6; National Telephone Cooperative Association, et al., p. 36; NASUCA Comments, p. 9; OnStar, LLC Comments, p. 23; Peerless Networks, Inc. Comments, p. 5; RCA Comments, p. 9; Twilio Inc. Comments, p. 1; United States Cellular Corporation Comments, p. 33; XO Comments, p. 37.
[144] Alaska Communications Systems, Inc. Comments, p. 11.
[145] California Public Utilities Commission, p. 8.

> mechanism, in particular, because of the complexities in a tiered arrangement of identifying various speeds of circuits and capacity offered to a particular customer.[146]

The Coalition for Rational Universal Service and Intercarrier Reform states:

> A fee, like a tax, is fairest when it exercises the least structural influence on prices. A revenue-based approach meets that criterion. Any approach that departs from revenues as the basis of the fee necessarily increases the rate paid by some types of payers and decreases the rate paid by others. This leads to distortions in the marketplace, encourages some kinds of behavior while discouraging others, and favors some market players while disfavoring others. These alternative proposals are thus anticompetitive and would in fact be counterproductive.[147]

United States Cellular describes the pro-competitive aspects of a revenue-based approach:

> The revenues-based methodology produces equitable, pro-competitive results. The California PUC White Paper, for example, concludes that, "[i]f broadband subsidies are included in the USF and the revenue base is expanded to include broadband revenues, the [revenues-based] methodology would demonstrate proportionality between the industries and services subject to assessment and those eligible for subsidies." This harmony produced by a revenues-based system, between each industry's and service's contribution obligation and its eligibility for Fund support, is an equitable result that promotes competition among different classes of telecommunications and broadband service providers.[148]

XO supports the continuation of the revenue-based approach, and points to problems that could emerge if the federal system migrated to a non-revenue-based approach while the states maintain a revenue-based approach:

> [I]mplementing a connections-based system for assessing federal USF while state USF funds remain revenue-based would be particularly complicated, leading to both gaps and double counting of services for assessment.[149]

In summary, the use of a revenue-based contribution method continues to be the best approach to assess contribution. As will be discussed further below, many parties in addition to AARP indicate that alternatives based on connections and/or numbers do not provide a reasonable basis for assessing contribution given the direction taken by the Commission to support broadband.

---

[146] Clearwire Comments, p. 6.
[147] Coalition for Rational Universal Service and Intercarrier Reform, p. 1.
[148] United States Cellular Corporation Comments, pp. 33-34.
[149] XO Comments, p. 37.

Numbers- and Connection-Based Assessments are Decidedly Inferior

In opening Comments, AARP pointed to the significant problems with numbers- and connection-based approaches, not the least of which is that both are regressive "head taxes."[150] Many parties are also opposed to these approaches.[151] Cincinnati Bell states that "no system is impervious to gaming and CBI is concerned that if either a connections or numbers-based methodology is adopted, would-be contributors will find new loopholes and complexities will quickly present themselves that may take years to ferret out and correct."[152] XO states that a connections-based approach would impose costs, but not generate benefits:

> XO disagrees that a connections-based system would be more administratively simple or provide a more stable contribution base. Rather, implementation of a connections-based system would impose considerable costs without commensurate benefit.[153]

Fiber Provider Coalition offers a succinct assessment of the problems with a connections-based approach that can only be solved by reverting to revenues:

> [A] connections-based system of contribution is likely to impose funding obligations that are disproportionate with the revenue generated from a service. A T-3 provides 672 times as many connections as a DS-0, but does not generate nearly 672 times as much revenue…. while it is possible to mitigate the impact of the fact that larger circuits contain a larger number of connections per dollar of revenue generated (e.g., through a tier-based system), the only way to eliminate the impact of this fact completely is to go back to a revenue-based system of assessment.[154]

[150] AARP Comments, p. v.
[151] Alaska Communications Systems, p. 12; Alexicon Comments, p. 12; Alliance of Automobile Manufacturers, Inc., p. 1; Association of Teleservices International, p. i; Cable and Wireless Worldwide Comments, p. 4; California Public Utilities Commission Comments, p. 8; Clearwire Comments, p. 6; Coalition for Rational Universal Service and Intercarrier Compensation Reform, p. 7; COMPTEL Comments, pp. 33-34; Critical Messaging Association Comments, p. i; Earthlink, Integra, and TW Telecom Comments, p. 18; Higher Education Association Comments, p. 3; International Carrier Coalition Comments, p. 13; NASUCA Comments, pp. 19-20; NTCA et al. Comments, pp. 36-37; OnStar Comments, pp. 6-8; Peerless Network Inc., p. 7; RCA Comments, p. 9; Rural Telecommunications Group Comments, pp. 8-9; Time Warner Cable Comments, p. 3; Twilio Inc. Comments, p. 4; United States Cellular Corporation Comments, pp. 32-33; Universal Service for America Coalition Comments, pp. 10-11; USA Mobility Comments, p. 2; XO Comments, pp. 33-36.
[152] Cincinnati Bell Inc. Comments, p. 8.
[153] XO Comments, p. 36.
[154] Fiber Provider Coalition, pp. 14-15.

TracFone illustrates the inequity of a numbers-based approach for low-income consumers, by evaluating the FNPRM's "$1.00 per assessable number" discussion:

> Based on its customers' actual usage, TracFone's per customer USF obligation under the current revenue-based methodology is substantially less than $1.00 per month. Thus, imposition of a monthly per number charge of $1.00 would significantly increase the price of prepaid wireless services to millions of low-income consumers, many of whom have no other available and affordable means for obtaining telephone service in general, and wireless telecommunications service in particular.[155]

American Cable Association states that the use of capacity tiers to remedy the problems of a connections-based approach would be distortionary:

> [A]n assessment based on speed or capacity would interfere with the growth and development of the market, inhibit consumers from subscribing to higher speed or capacity services, or discourage providers from enhancing their broadband plant.[156]

Comcast is also critical of capacity tiers, especially for residential customers:

> [R]esidential speed tiers may cause providers unilaterally to limit the speed of their broadband offerings in order to avoid a higher USF assessment that would harm their ability to compete with rival slower-speed offerings. Discouraging the deployment of higher-speed, more technologically advanced broadband services plainly is inconsistent with the National Broadband Plan and the Commission's broadband policies. In light of the magnitude of these potential harms, Comcast urges the Commission to reject the use of speed or capacity tiers for residential and small business customers.[157]

CenturyLink points to the complexity of establishing a capacity-based assessment:

> If capacity is a factor in scaling, different scales may be needed for residential versus enterprise services, where the network functionality and service level at any given level of capacity—and thus the value of the service—may not be comparable.[158]

CenturyLink also points to problems with the numbers- and connections-based approaches—"scaling the assessment on each connection or number in a way that equitably reflects the end user's burden on the network can be more complex than under a revenue-based approach."[159]

[155] TracFone Comments, p. 5.
[156] American Cable Association Comments, p. ii.
[157] Comcast Comments, p. 22.
[158] CenturyLink Comments, p. 14.
[159] CenturyLink Comments, p. 18.

Parties Advocating Numbers- or Connections-Based Approaches Do Not Present Any Credible Plan

On the other hand, AT&T indicates that the Commission should be prepared for the revenue-based approach to become untenable in the "not-so-distant" future,[160] arguing that interstate telecommunications revenues will "bear little relation to the sources of many contributors' actual revenues."[161] AT&T does not explain what specifically will drive the difference between the "actual revenues" and interstate telecommunications revenues, but to the extent that the differential is driven by a growing prevalence of information services, that issue can be addressed by the exercise of the Commission's permissive authority. AT&T indicates that it believes that a connections-based approach is "far superior to the Commission maintaining the status quo,"[162] however, while AT&T states that the time is ripe to abandon the revenue-based approach, what AT&T proposes as a replacement is less than clear.[163] AT&T states that either its previously-proposed numbers- or connections-based proposals would be superior to the current regime.[164] AT&T also states that mass-market broadband services should be assessed "at least within any revenues- or connections-based regime."[165] Thus, AT&T's support for its proposed numbers-based approach has the fundamental problem that not all services that AT&T says need to be assessed will be assessed as broadband services are not linked to the North American Numbering Plan. As a result, the only way that a numbers-based approach can be salvaged is to jerry-rig some hybrid alternative.

To remedy problems with a numbers-based approach, AT&T indicates that service providers could be divided into categories—"providers of postpaid wireless services could

[160] AT&T Comments, p. 18.
[161] AT&T Comments, p. 18.
[162] AT&T Comments, p. 22.
[163] AT&T Comments, p. 17.
[164] AT&T Comments, p. 18.
[165] AT&T Comments, p. 13.

contribute based on telephone numbers, as an example, but providers of machine-to-machine services could contribute based on some other widget."[166] While AT&T does not identify the "widget" in this example, AT&T does indicate that numerous "widgets" are needed.[167] AARP does not see the benefits of multiple bases and multiple "widgets" to determine contribution, when revenues will provide a single basis that is applicable to any eligible contributor.

With regard to a connections-based approach, AT&T's comments clearly illustrate that this method is also complicated[168] and administratively difficult. For example, AT&T states that for a connections-based approach to work, "capacity tiers" would be required, but that "setting the capacity tiers so as not to distort the market will require further industry discussion and input."[169] In other words, AT&T cannot tell the Commission how the connections-based approach would address capacity tiers.

Sprint Nextel offers a supportive discussion of a number-based approach and argues that a numbers-based approach would be "equitable and nondiscriminatory,"[170] however, it is difficult to see how an approach that would exempt all services that do not utilize NANPA numbers would be satisfy these criteria. By arbitrarily exempting broadband connections (as they do not rely on NANPA numbers), an inequitable and discriminatory outcome results. Given changes that have occurred since its initial advocacy for a numbers-based approach, Sprint Nextel ultimately concludes that "[b]ecause telephone numbers are voice-centric and because voice is such a small percentage of all broadband traffic, Sprint submits that a numbers-based

[166] AT&T Comments, pp. 19-20.
[167] AT&T Comments, p. 19.
[168] AT&T Comments, p. 22, stating that a connections-based approach is more complicated than a number-based assessment.
[169] AT&T Comments, p. 22.
[170] Sprint Nextel Comments, p. 24.

system is not an ideal methodology to fund a broadband-centric USF."[171] AARP certainly agrees with this portion of Sprint Nextel's assessment of a numbers-based approach.

Sprint Nextel also recommends that a connection-based approach be utilized,[172] but Sprint Nextel completely ignores the inequity associated with assessing a low-grade residential broadband connection at the same rate as a high-capacity business connection. Sprint Nextel does not mention any adjustments to a connections-based approach, such as the capacity tier model advanced by AT&T. Sprint Nextel does, however, address the jurisdictional issues associated with a connections-based approach and argues that the Commission's approach to the recovery of local-loop costs provides a model for recovering USF contributions.[173] It is important to note that the flat-rate subscriber-line charge approach advocated by Sprint Nextel employed a bright-line rule—25% of loop costs allocated to the interstate. Thus, Sprint Nextel's connection-based approach appears to envision an allocation of connections between jurisdictions.

Comcast advocates for a hybrid numbers- and connection-based approach.[174] Under Comcast's proposal, residential broadband connections will remain unassessed,[175] thus continuing the inequity of USF monies supporting broadband, and failing to expand the contribution base to broadband. To augment the numbers-based approach, Comcast proposes to assess the number of connections associated with medium and large enterprise customers.[176] Comcast provides no details as to how its proposed hybrid approach would work. However,

[171] Sprint Nextel Comments, p. 25.
[172] Sprint Nextel Comments, pp. 27-28.
[173] Sprint Nextel Comments, p. 28.
[174] Comcast Comments, p. 28.
[175] Comcast Comments, p. 27, footnote 83.
[176] Comcast Comments, p. 28.

Comcast elsewhere specifies that speed or capacity tiers are problematic and should not be adopted.[177]

Verizon also points to the desirability of an "appropriate numbers-based mechanism."[178] However, Verizon does not offer a proposal as to how such an approach would work, only noting that shortcomings of the numbers-based approach has led to hybrid proposals. Verizon concludes that "[t]he benefits of a numbers-based contribution system would be diminished if not lost altogether if the Commission were to follow such a hybrid approach."[179] What Verizon does not address, however, is how a non-hybrid numbers approach would address some of the very services that Verizon says should be assessed. For example, Verizon points to the appropriateness of assessing MPLS-based services by utilizing the MPLS Accessible Revenue Component (MARC) plan advanced by an industry group, of which Verizon is a part.[180] The MARC approach advocated by Verizon does not have a numbers-based component.[181] Thus Verizon, by requesting both MARC and a numbers-based approach is advocating that this Commission adopt the very hybrid approach that Verizon says is unworkable.

[177] Comcast Comments, pp. 22-23.
[178] Verizon Comments, p. 46.
[179] Verizon Comments, p. 47.
[180] Verizon Comments, p. 25; see also Ex Parte Letter from Sheba Chacko, Senior Counsel – BT Global Services, Michele Farquhar, Counsel – NTT America, Inc., Ivana Kriznic, Regulatory Counsel – Orange Business Services, Marybeth Banks, Government Affairs Director – Sprint Nextel Corporation, Maggie McCready, Federal Regulatory Vice President – Verizon, and Tiki Gaugler, Senior Attorney – XO Communications, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 06-122 (filed March 29, 2012).
[181] March 29, 2012 *Ex Parte* from Sheba Chacko, Tiki Gaugler, Ivana Kriznic, Marybeth Banks, Michele Farquhar, Maggie McCready to Marlene H. Dortch in Re: Universal Service Contribution Methodology, WC Docket No. 06-122, pp. 5-6.

Verizon is critical of a connections-based approach, and states that the connection speed or capacity tiers necessary to enable a connections-based approach are "inherently arbitrary."[182] To make its point, Verizon points to one of the problems with a connections-based approach:

> For example, two wireless connections might have the same bandwidth but one might be used for a low-revenue, low-usage telematics or machine to- machine service while the other is used for a higher-usage, higher-revenue service. To design a viable connections-based system, the Commission would have to ensure that the per-connection assessment is fair for the range of services that might use a particular type of connection and does not distort the market for low-revenue applications such as some telematics and machine-to-machine services.[183]

This quotation illustrates both the problems with a connections-based approach, and the superiority of a revenue-based approach. By assessing the services described by Verizon based on revenues, the fairness that Verizon seeks would be delivered, and distortions would be avoided.

Google also recommends that a connections based approach will provide a superior alternative.[184] Google argues that the Commission should assess all wireless and wireline connections equally, as this would be a "technology-neutral, (and) administratively simple mechanism."[185] While not providing many details, Google's proposal appears to envision a regime where all connections, regardless of their capacity, are assessed at the same rate. Thus, a residential basic voice customer would pay the same rate as an enterprise customer using an enterprise-grade high-capacity circuit. Such an approach, while certainly advantageous for enterprise customers such as Google, would be highly inequitable. Google's proposal should be rejected by the Commission.

---

[182] Verizon Comments, p. 48.
[183] Verizon Comments, p. 48.
[184] Google Comments, p. 5.
[185] Google Comments, p. 5.

In a similar vein, American Petroleum Institute (API) points to an alleged advantage of a numbers-based approach, in that a numbers-based approach would exclude high-capacity enterprise-grade services such as ATM, Frame Relay, and VPNs.[186] API states that this outcome would be equitable: "Although higher capacity services are not directly captured, this applies to all users equally."[187] Thus, API's numbers-based approach would result in an Anatole France-like "majestic equality" in that both residential customers who utilize enterprise services and enterprise customers who utilize enterprise services would be exempted from contributing to the fund.[188] Residential customers would get the short end of API's proposal.

Ad Hoc Telecommunications Users (Ad Hoc) also states that "[a] numbers-based assessment further satisfies the important goal of imposing assessments on a competitively neutral and technology agnostic basis."[189] Ad Hoc fails to explain how the exclusion of all services that do not have a NANPA number, such as broadband services and many enterprise services, is either technology agnostic or competitively neutral. The numbers-based approach advocated by Ad Hoc is not reasonable.

The outcomes suggested by advocates of the number-based approach are anything but equitable or neutral. As noted by Association of Teleservices International, Inc.:

> "Numbers" is fatally flawed philosophically because it is premised on assessing the same flat fee per month on every telephone number in use, despite the wide variation in the price of services to which telephone numbers are assigned, and despite the similarly wide variation in the burden on or usage of the network represented by the different services associated with assigned telephone numbers. The result of such facially "equal" treatment of telephone number usage in fact would be a massive, unjustified shift in the burden of

[186] American Petroleum Institute Comments, p. 5.
[187] American Petroleum Institute Comments, p. 5.
[188] "The law, in its majestic equality, forbids the rich as well as the poor to sleep under bridges, to beg in the streets, and to steal bread." Anatole France.
[189] Ad Hoc Telecommunications Users Comments, p. 9.

> USF contribution obligations among user groups, unrelated to the statutory objectives for universal service.[190]

In summary, no party that advocates either a numbers- or connections-based approach has provided the Commission with a plan that reasonably addresses the long-standing criticisms of these approaches. Numbers- and connections-based approaches are not well suited for the transition from the support of PSTN to broadband access networks. Numbers- and connections-based approaches are inequitable and suffer from intractable implementation problems that will only hinder the Commission's efforts to reform universal service funding.

Billing and Line-Item Contribution Recovery

AARP believes that consumers have the right to know the amounts associated with USF charges appearing on their bill, and that there is no reason to expect that competition will "compete away" the USF assessment.[191] Many other commenters favor the ability of service providers to identify the USF contribution as a line item.[192] Alaska Communications Systems states "the high explicit assessment rate on today's revenue base has served as an important and public bellwether signaling the need for reform."[193] The California Public Utilities Commission notes that the proposed rule to prohibit line items "contradicts CPUC policies which require transparency of program surcharges on customer bills."[194] Similar sentiment is expressed by the Public Service Commission of the District of Columbia: "The DC PSC believes that line items identifying USF fees provide vital information to end users."[195] AARP believes that unless line

[190] Association of Teleservices International, Inc., p. 4.
[191] AARP Comments, ¶¶93-95.
[192] Cable and Wireless Worldwide Comments, p. 4; Cincinnati Bell Comments, p. 23; COMPTEL Comments, p. 39; Earthlink Comments, p. 21; Fiber Provider Coalition Comments, p. 8; Level 3 Comments, p. iii; National Cable and Telecommunications Association, p. 3; Nexus Communications, p. 7; Peerless Network Inc. Comments, p. 14; T-Mobile Comments, p. 12; Telestra Comments, p. 9; XO Comments, p. 50.
[193] Alaska Communications Systems Comments, p. 24.
[194] California Public Utilities Commission Comments, p. 16.
[195] Public Service Commission of the District of Columbia Comments, p. 5.

items continue, that the lack of market competition will result in an inappropriate pass-through, a point also made by Peerless Networks Inc.:

> [S]uch a prohibition [on line-item recovery] would likely result in other, less transparent forms of pass through to customers (such as raising rates generally, other types of line-items, etc.). As such, a general prohibition on passing through USF contribution assessments would not serve the public interest.[196]

On the other hand, according to Verizon, detailed billing information regarding the USF contribution is not needed.[197] Verizon states that in focus groups that it has conducted, consumers related that they want simple, easy to read, and short bills.[198] Likewise, CTIA states that conveying USF contribution information to consumers would be "very confusing to consumers."[199]

AARP does not believe that the proposal to include information on customer bills that would allow the consumer to identify the assessable portion of their bill and the assessment factor are beyond the capabilities of consumers to understand, nor will it impose an excessive burden on carriers. If the Commission establishes a consistent set of requirements for the presentation of USF information on consumer bills (both paper and online), the potential for confusion will be reduced. Verizon's claim that the only way to achieve this result is to publish a separate line item on the customer's bill for each and every charge that was subject to assessment is a red herring. There is no need to add "pages and pages"[200] to customer bills to ensure that consumers have the ability to identify the amount they are being assessed for USF purposes. Verizon also argues that the Commission should not prohibit providers from placing

[196] Peerless Network Inc. Comments, p. 14.
[197] Verizon Comments, p. 49.
[198] Verizon Comments, p. 49.
[199] CTIA Comments, p. 27.
[200] Verizon Comments, p. 51.

line items on consumer bills that identifies the federal universal service fee.[201] AARP agrees with Verizon that this would contradict Truth-in-Billing rules. However, it is somewhat contradictory for Verizon to argue that it should have the right to label a charge appearing on a bill as a USF contribution, but to argue at the same time that consumers do not have the right to see the assessable portion of the bill and the contribution factor.

United States Cellular is also opposed to bill information that allows the consumer to understand how their universal assessment has been calculated.[202] United States Cellular adds:

> Moreover, any customer interested in protecting himself or herself against being overcharged by the miscalculated flow-through of USF contributions has the option of querying the carrier involved to learn how the flow-through charges were derived and to confirm their accuracy.[203]

AARP does not believe that this type of approach makes sense. Imposing a burden on the millions of customers who will be paying the USF assessment by forcing them to seek out information on the flow-through of charges is a step in the wrong direction.

Common sense should prevail with regard to the design of bills that would enable consumers to see the assessable portion of their bills, and the contribution factor. For residential customers, the number of assessable services is not likely to be large, especially if they purchase a bundle. The Commission has heard through the comments a great deal about the growing importance of bundled service offerings.[204] If a consumer purchases a bundle, there will be one assessable item on the consumer's bill. Alternatively, given the sophistication apparent in carrier web sites with regard to customer account information, it could make sense to present summary information on paper bills, with reference to a web-based presentation of more detailed

[201] Verizon Comments, p. 52.
[202] United States Cellular Comments, p. 47.
[203] United States Cellular Comments, p. 47.
[204] See discussion above in the "Assessing Bundled Service Offerings" section.

information, such as the service-by-service assessment and contribution factors. The Commission could, for residential customers, develop a "best-practice" web format that could be adopted by carriers.

Conclusion

The comments filed in response to the FNPRM provide ample support for the expansion of the contribution base, which will provide a stable foundation for the future of the Universal Service Fund. While the explicit support for broadband is a new direction, the fundamental principles that have previously guided the Commission can provide policy continuity. The Commission has consistently recognized that because of the network effects associated with supported services, all network users benefit from the supported services. As a result, the Commission should expand the contribution base to include all who will benefit from the expanded broadband platform. This reply has outlined the key steps that should be taken:

- The Commission should expand the contribution base to include enterprise, text messaging, one-way VoIP, and broadband Internet access services.
- The Commission should apply a revenue-based approach to assessment.
- The Commission should develop safe harbors for assessment purposes based on traffic studies conducted by, or in compliance with best practices developed by, the Commission. States must have the ability to assess broadband revenues for state universal service programs.
- The Commission should require service providers to identify the assessable portion of a customer's bill, and clearly state the assessment factor and assessment amount on the customer's bill.

By following this guidance, the Commission can ensure the success of its reform efforts.